

# Enduring UK Link Testing – Approach

## Table of Contents

<b>1</b>	<b>INTRODUCTION .....</b>	<b>2</b>
1.1	PURPOSE OF THIS DOCUMENT .....	2
1.2	Summary .....	2
<b>2</b>	<b>CONTEXT .....</b>	<b>Error! Bookmark not defined.2</b>
<b>3</b>	<b>TEST OBJECTIVES &amp; SCOPE.....</b>	<b>Error! Bookmark not defined.3</b>
3.1	TESTING OBJECTIVES.....	<b>ERROR! BOOKMARK NOT DEFINED.3</b>
3.2	IN SCOPE.....	65
<b>4</b>	<b>TEST PLANNING .....</b>	<b>Error! Bookmark not defined.6</b>
4.1	MANDATORY PROCESSES .....	<b>ERROR! BOOKMARK NOT DEFINED.8</b>
4.2	KEY ATTRIBUTES OF COMPONENT TESTING.....	8
4.3	KEY ATTRIBUTES OF MULTI PARTY TESTING .....	9
4.4	INDUSTRY PARTNERING .....	9
4.5	FILE TRANSFER PRINCIPLES.....	10
4.6	CRITICAL PATH (LIFECYCLE) & SUPPORT SCHEDULE .....	1310
<b>5</b>	<b>REGISTRATION PROCESS.....</b>	<b>11</b>
<b>6</b>	<b>TEST ENVIRONMENT AND DATA.....</b>	<b>Error! Bookmark not defined.11</b>
6.1	TEST ENVIRONMENT .....	11
6.2	SOFTWARE VERSIONS .....	12
6.3	DATA.....	1712
6.4	DUMMY PORTFOLIO .....	1712
<b>7</b>	<b>DEFECT AND QUERY MANAGEMENT .....</b>	<b>Error! Bookmark not defined.13</b>
7.1	DEFECT MANAGEMENT PROCESS .....	1814
7.2	QUERIES .....	2016
7.3	DEFECT AND QUERY REPORTING.....	16
<b>8</b>	<b>PROGRESS REPORTING.....</b>	<b>Error! Bookmark not defined.17</b>
<b>9</b>	<b>DEPENDENCIES.....</b>	<b>Error! Bookmark not defined.17</b>
<b>10</b>	<b>PROVISIONS AND RESTRICTIONS .....</b>	<b>Error! Bookmark not defined.18</b>
<b>11</b>	<b>DEFINITIONS, ACRONYMS &amp; ABBREVIATION.....</b>	<b>2319</b>

[1]

# 1. INTRODUCTION

## 1.1 Purpose of This Document

This document defines the approach to be followed for the testing of changes<sup>[2]</sup> to the UK Link Systems and User systems either as a result of a UK Link Modification ('Industry Testing') or for specific Users to test their own systems ('User Testing') – such as new entrants or Users undertaking testing following changes to their systems or processes.

When UNC Modifications are considered the testing requirements must be considered so that any costing products such as Rough Order of Magnitudes can take account of such requirements. Following approval of UK Link Modifications it is expected that the Users and Transporters will define the testing requirements which will be approved at the ~~The testing requirements will be defined by the UK Link Committee~~<sup>[3]</sup>.

This document will cover the following:

- Introduction and Context;
- Objectives and Scope;
- Test Planning and Approach;
- Registration for Industry Testing;
- Environment and Data requirements;
- Query and Defect Management; and
- Reporting
- Dependencies
- Provisions and Restrictions

Stakeholders participating in Industry Testing or User Testing should complete the registration process and be aware of these guidelines<sup>[4]</sup> set out in this approach document.

Industry testing will test that changes to the new UK Link systems work successfully.<sup>[5]</sup>

## 1.2 Summary

The Modifications<sup>[6]</sup> Process, as defined in the UNC, facilitates the proposal, assessment and implementation of changes to the UNC. Such changes to the UNC must be reflected in the service agreements and computer systems that support the day to day operational aspects of the UNC requirements. Similarly changes to processes may give rise to changes to computer systems. The nature of some changes can be expected to impact the interactions between the central computer systems and those of participant companies. The UK Link System is defined in the UK Link Manual. Any changes to the specification of the System must be notified via a UK Link Modification. These processes are specified in Section U of the UNC. This document details the A-test service, that is similar in nature to the live X-serve Transporter Agency production systems, which can be made available to increase the level of assurance, to individual companies, and to the industry as a whole.

The Participant test service is expected to be utilised by Users so that they may get assurance that:

- any changes to the UK Link System will successfully integrate with their systems or processes (i.e. Industry Testing), or that
- any changes that they have undertaken to their systems or processes will successfully interact with the UK Link System (i.e. User Testing) of benefit to three broad categories of user, these are:

The parties that may interact with such a testing environment are –UNC pParties or their /Party Agents.

~~New Entrants;~~ <sup>[7]</sup>

~~• Xoserve.~~

~~Dependant upon the need of the User, the test service typically may operate with the same version of the application software [8] that is on the production UK Link System or a version of the application code as specified – e.g. to test a UK Link Release.~~

~~as the corresponding live service, and will have in place much of the live base data – thus enabling participants to test against the service in a near live environment. The data available is intended to include live data from the UK Link System and some manufactured data in order that Change of Shipper events may be tested. Data principles are set out below.~~

~~The test system supports a single system environment testing instance. This instance will be reserved for Industry Testing in advance of UK Link Modifications but shall be available to other Users for User Testing at other times, subject to availability; which will be available to participants for informal and self-managed testing and will be available for use by UNC Parties.~~

## **2. CONTEXT**<sup>[9]</sup>

~~Industry Testing scope will be defined and agreed by the UK Link Committee. It is expected that the Committee will agree the processes impacted and the proposed test cases. It is expected that this will also include negative outcomes.~~

~~Testing of processes that have not been defined as impacted will not be supported during Industry Testing phases.~~

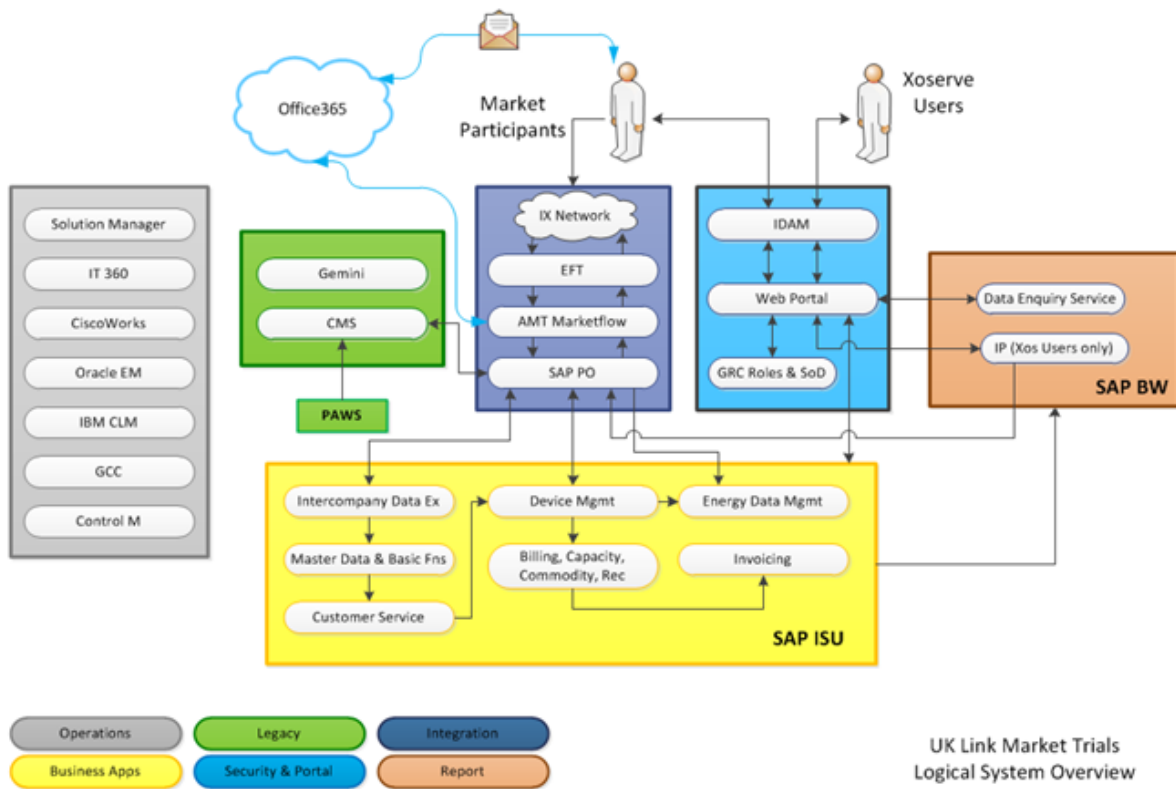
~~will constitute testing of solution components by Stakeholders to verify that they can functionally perform together in a production like operational environment. This may be completed by executing a number of component tests. However, it is recommended that end-to-end Business process flows will be tested which are based on the functional value chains that are mainly aligned to the Business processes.~~

~~Users may define their own test objectives and scope. This must be documented in advance between the User(s) and the Transporter Agency.~~

~~This testing environment is not intended for performance testing.~~

~~This will be supported on a lower level of support than the production environment.~~

The logical appreciation of the end to end systems involved in System Integration is in Figure 1.



UK Link Market Trials  
Logical System Overview

### 3. TEST OBJECTIVES AND SCOPE<sup>[10]</sup>

#### 3.1 The objectives of Testing ~~are~~include:

- To fully prepare external parties and Xoserve for changes to the UK Link System replacement and to verify that Xoserve's and industry systems work as intended<sup>[11]</sup>
- To provide an opportunity for all participants to prove the systems and processes work by verification of their test scenarios through the execution of test cases. <sup>[12]</sup>
- The ultimate objective is to provide evidence that the system and supporting business processes function as expected and in line with the Nexus requirements agreed with the Industry. <sup>[13]</sup>
- To provide the opportunity for Stakeholders and ~~the Xoserve-Transporter Agency~~ to identify, address and resolve any issues prior to implementation of the changes to ensure the system changes are ready to go live. <sup>[14]</sup>
- To provide the outcome of all changes being tested which will directly feed in to the overall Project Nexus change decision. ~~The decision will be recommended by the UK Link Committee~~<sup>[15]</sup>
- To provide all Stakeholders in Testing with the opportunity for familiarisation with the behaviour of the system, screens and interfaces as well as process files ~~using valid data (including the agreed data anonymisation rules)~~ <sup>[16]</sup> through ~~all relevant~~ interfaces in a production like environment testing functional data and multi-party activity
- To ensure that Reporting provisions are provided under regulatory or licence frameworks (e.g. UNC, Non-Code User Pays, ASA, iGTASA or other governance processes) <sup>[17]</sup>

The volume of files sent in by market participants should reflect production and excessive volumes should not be sent in as testing files.

The test -system is available (via a booking system) for ~~User Testing. participants to carry out whatever testing they require~~

It is expected that the system will be used for the following types of testing:

- For structured testing of new releases of UK Link systems ~~—this will be managed by Xoserve~~
- To allow participants to test against new versions of the UK Link systems;
- To allow participants to test new versions of their software against the existing systems
- To allow participants to test scenarios or situations prior to their use in live;<sup>[18]</sup>

## 3.2 In Scope

### Systems

Figure 2 provides an overview of ~~which Xoserve~~-systems which, dependant upon the agreed objectives of testing, can be included within the scope of Industry Testing or User Testing.

**FIGURE 2 – LIST OF IN-SCOPE ~~XOSERVE~~ SYSTEMS**

SYSTEM
AMT Market flow
<del>UK Link(Legacy)</del>
SAP ISU
<del>Contact Management Service (CMS)</del>
UK Link Web Portal
<del>Data Enquiry Service (DES)</del>
Information Exchange (IX)
<del>Gemini</del>
<del>Business Warehouse (SAP BW)</del>
Office365

### Non-functional Scope

~~Xoserve has recognised that some areas of non-functional testing should be included in Testing and will take the opportunity to execute testing in the following areas:~~

- ~~• Xoserve managed system interfaces will be monitored throughout the Testing period;~~
- ~~• Security penetration testing will have been completed prior to the commencement of Testing and Office 365 will be configured to external stakeholders if required;~~
- ~~• Audit and Controls – audit and controls will reflect production and will follow SAP audit & controls routines;~~
- ~~• Maintenance and Supportability – Environments will be supported throughout the period of Testing to reflect production protocols; and~~

~~Operational Reporting – Will be managed by the Xoserve team and reported to all organisations and The UK Link Committee. [19]~~

### Processes

- ~~• The UK Link Committee shall agree the processes that shall be in the scope of Industry Testing.~~
- ~~• Users shall, in conjunction with the Transporter Agency, define the processes available for User Testing.~~

### Out of scope

The following ~~functional~~-areas are out of scope for ~~UK Link~~Industry Testing:

- ~~• Any systems not referenced above.~~

- Any processes that are not impacted by the proposed UK Link Modification(s) unless specifically defined by the UK Link Committee.
- Any other system and its processes that do not require modification as a consequence of the UK Link Programme, however, this does not preclude any testing required to enter and exit Nexus; however unless specified as being, it should be noted that some processes which have not changed may required by the UK Link Committee testing as they are part of the E2E process. These Any testing of processes will not be supported. should be considered as non-critical (C3).
- ~~Gemini and ANS are out of scope.~~
- Provision of advice or remedies relating to systems owned or managed by external parties.

Xoserve may conduct a non-functional test phase separate to Industry Testing

The full scope of this phase will be made available through the appropriate governance body and may include the following areas:

- Testing of Service desk and service management activities;
- Archiving of data and files;
- Performance testing – this will be carried out internally by Xoserve;
- Volumetric testing;

As a result, these areas are deemed out of scope for Industry Testing.

#### 4. ~~TEST TESTING DEFINITION PLANNING~~<sup>[20]</sup> – to be assessed against the UK Link manual and referenced to the new UKLC approval for test environments

##### 4.1 Industry Testing Definition

The following must be agreed by the UK Link Committee to define the scope of Industry Testing.

The outcomes must be documented in a UK Link Modification Testing Approach or, in the case of a UK Link Release, a UK Link Release Testing Approach document.<sup>[21]</sup>

This UK Link Modification or Release Testing Approach document must be approved by the UK Link Committee. The testing approach may be approved separate to the UK Link Modification itself.<sup>[22]</sup>

The UK Link Modification or Release Testing Approach must be approved [6 months] in advance of the Implementation Date of the UK Link Modification or Release unless agreed otherwise by the UK Link Committee. [The Transporters do not normally vote at the Committee but in this vote they may do so.<sup>[23]</sup>

Test files **must** be prefixed by 'TN' to denote that it is a test file and to avoid confusing with production files.<sup>[24]</sup>

Files should be placed in the appropriate IX export folder (See Section 4.4). The EFT will poll this folder at a frequency of every 5 minutes and transfer any files to Xoserve's IX inbox and onto AMT Market flow where the file will be consumed, then transferred through to SAP ISU and full validation.<sup>[25]</sup>

There will be formal agreement at the UK Link Committee on any mandatory processes for each testing phase.

Processes should be tested across LSP/SSP/GT and iGT as well as, and not limited to, data loggers, imperial, metric and SMART meters where appropriate.<sup>[26]</sup>

Positive and negative testing should be carried out<sup>[27]</sup>

Negative tests, either purposefully created through a negative test or through incorrect formatting will prompt AMT Market flow to respond with a rejection file (ERR, FRJ):

- ERR files are record level failures and are generated when there is an anomaly with the content of a record within the file; for example, a mandatory field is missing, an alpha field has a numeric, there are too many characters in a record etc. The validation checks whether the data contained within the file is correct, for example, whether the shipper owns a particular MPRN;
- FRJ files are file level failures and are generated when there are invalid record formats. The FRJ file will notify the originator about the nature of the rejection by assigning a rejection reason (S71 record); and
- NB: DEL files are delivery notifications that are sent to DMSPs only, upon receipt of a valid DLC file.

### File/record format validation and rejection

The validations performed on the File format and Record Format are explained in figure 3 below:

**FIGURE 3 – FILE/RECORD FORMAT VALIDATIONS – remove?**

#	Validation description
1.	All mandatory fields are populated.
2.	Empty text fields are represented with double quotes as text qualifiers. If a text field is empty, the field must still be represented with the text qualifiers of double quotes i.e. ""
3.	When the Supplier ID is provided, the Supplier Effective From Date (EFD) must also be provided.
4.	Records contain the correct field length. Incorrectly formatted data will result in the corresponding record being rejected
5.	The number of fields in each record should be equal to the number of fields for that particular record type.
6.	The field length for each data item should be less than or equal to the length defined for that data item.
7.	Records are populated with the correct data type (e.g. numeric, text, date).
8.	Intra-conditionality : Some optional fields become mandatory , for example: If the Meter Serial Number is populated, then the Gas Act Owner field MUST be populated — without the Serial number, the Gas Act Owner is remains optional
9.	The format of the Date field is YYYYMMDD, where YYYY is the Year, MM is the Month, DD is the Day.
10.	The file generation number is in sequence. If a subsequent file is submitted, the 'nnnnnn' portion of the file name must increment accordingly i.e. is not duplicated. If a file with same generation number is sent, and if it had been previously processed, then this new file will be rejected as being duplicate.  Note : a negative test may include sending a file with the same number to prove that a duplicate file is rejected



11.	Text fields are represented with double quotes as text qualifiers. If a text field is empty, the field must still be represented with the text qualifiers of double quotes i.e. "".
12.	No invalid characters or structural errors are included within the file as this will cause the whole file to reject.
13.	A header record type "A00" and trailer record type "Z99" are provided.
14.	There is a match between the Originator ID in the file name and the header record.
15.	The File type in the file name and header record match.
16.	The Creation date/time of the file is in the correct format YYYYMMDD in order to be validated.
17.	The generation number in the file name and header record match.
18.	The number of records in the file should match the record count mentioned in the trailer record.
19.	The transaction type of each record is a valid record type (e.g. E42, E43, etc.).
20.	Commas must not be present between the text qualifiers (double quotes), otherwise additional fields will be created
21.	Validations will be carried out to ensure that data matches with values currently stored in the UK Link application. Organisational data such as Supplier, Meter Asset manager(MAM), Smart Metering System Operator(SMSO) and Installing Supplier (ISS) identities will be validated against the values held in the Xoserve master Organisation table to check if, where relevant, they have a licenced entity ID. Irrespective of whether these are held in MDD, the file will be processed against the values stored in the Xoserve master Organisation table, where these do not exist, the file will be rejected

[31]

Audit log files will be available to stakeholders on the files sent via the IX network from their respective IX servers during all Testing.

Given that the rejections process is automated, Xoserve has no plans to issue any further rejection information to Users.

#### 4.1.1 ~~P~~Mandatory<sup>[32]</sup> process ~~D~~definition ~~remove~~ — part of the individual case definition

A full list of mandatory processes for each phase of testing will be specified by the UK Link Committee. These processes fall into 3 categories:

C1: Mandatory processes critical to ensure that the market can operate

Three mandatory processes were agreed at the special Change Overview Board held during March 2015.

The three mandatory processes were:

- ~~Manage Supply Meter Point Registration~~ (registration of shipper to a supply point and the nomination, confirmation & objection process as part of switching;
- ~~Manage Supply Meter Point Register~~ (updating of data held against a supply point such as asset data, measurement equipment, measurement data and energy calculations e.g. AQ); and
- ~~Record Supply Meter Point (MPRN Creation)~~

The minutes of this meeting can be found at: <http://www.gasgovernance.co.uk/cob/170315>

A full list of any mandatory<sup>[33]</sup> processes, including the required variants, will be specified for each phase of Testing by the UK Link Committee.

It should be noted that not all mandatory <sup>[34]</sup> processes will apply to all organisations. ~~and the mandatory process matrix details those relevant to each organisation type. This should then be evidenced to the UK Link Committee for success criteria.~~

~~Where a process is considered relevant Users are able to test business scenarios any valid to these processes – e.g. file appropriate to their organisation type and Users may test Supply Point Administration processes should test appropriate for Large Supply Points, Small Supply Points, different Read Product Classes. supply point types (LSP/SSP) <sup>[35]</sup>~~

## ~~C2: Mandatory processes classed as “organisational” critical dependent upon organisation and potentially market type.~~

~~These processes have been identified as those which are either critical to a specific organisation type or essential to a process at individual organisations~~

~~It is recommended that organisations test all C2 processes applicable to their operations. However, if a party does not test these it will not be classed as a reason for not completing industry testing if it is determined, and confirmed with the UK Link Committee, that the organisation will not be using some C2 files~~

~~A full list of mandatory processes can be found in section 11.2.~~

## ~~C3: Non-critical processes~~

~~All other processes will be classed as Non-Critical (C3 not be supported).~~

~~The list provided is not meant to represent a comprehensive list of non-critical processes and all participants should test processes as appropriate. <sup>[36]</sup>~~

~~All non-critical processes can still be tested in line with individual organisational test schedules and the structured testing model.~~

## ~~4.2 The key attributes of Component Testing – remove?~~

~~Functional testing, based on component testing across the interfaces between Xoserve and the organization. Tests will be carried out to ensure that processes operate as designed and reflect production activity. Users are able to test any valid file appropriate to their organisation type and should test appropriate supply point types (LSP/SSP) and meter types.~~

~~Consideration should be given to testing different meter types and ancillary equipment~~

~~Where a process requires Xoserve the Transporter Agency's initiation or manual intervention, agreement must be reached in advance of testing to ensure that this action is appropriately defined and agreed. testing is managed effectively. The process for doing this will require definition and agreement.~~

~~Users must use files generated by their systems and this will form part of the Industry Testing criteria evaluation.~~

### ~~4.1.2 Testing Duration and Plan~~

~~The UK Link Modification or Release Testing Approach must define the test duration and planned testing execution. In the absence of a specific plan when tests will be undertaken it is assumed that testing will be conducted on a flat profile – i.e. the same number of test cases executed every day.~~

A period at the end of testing will be allocated for any retesting by Users. During this period no new test cases may be submitted.

#### 4.1.3 Test Data Definition

The testing data principles are defined below, but the UK Link Modification or Release Testing Approach must specify any particular requirements, for example:

- Whether 'manufactured data' population needs to be expanded.
- Whether specific data / scenarios need to be expanded – e.g. additional Prime and Sub Supply Meter Points, manufacture of Class 2 Supply Meter Points, additional iGT data.

It is expected that a population of live data is maintained in the testing environment. Normal rules related to provision of this data to the non Registered User applies.<sup>[37]</sup>

Where live data is used in the testing environment the UK Link Modification or Release Testing Approach must specify a 'Target Data Refresh Date' where the data will be extracted from the production system. This may be inserted as a statement – e.g. 'one month from testing start date'. In such circumstances the Transporter Agency shall confirm the actual planned extract date one month in advance of this being undertaken.<sup>[38]</sup>

#### 4.1.3 The key attributes of mMulti Pparty Ttesting — case specific?

Functional testing across multi party testing may be specified in the UK Link Modification or Release Testing Approach. Such parties include; Sshipper Users, iGTs, GTs, DMSPs and Xeserve the Transporter Agency.

Where a party is requested, by the UK Link Committee, to participate they must approve the UK Link Modification or Release Testing Approach. Should a party NOT wish to participate options must be considered by participating parties to simulate their activities.

This will involve end to end testing and tests will be carried out to ensure that all processes operate as designed and all parties are capable of carrying out all necessary steps within a full process<sup>[39]</sup>

Users are able to test any valid file appropriate to their organisation type and should test appropriate supply point types (LSP/SSP)

Consideration should be given to testing different meter types and ancillary equipment<sup>[40]</sup>

Users must use files generated by their systems and this will form part of the Industry Testing criteria evaluation<sup>[41]</sup>

#### 4.4 Industry Partnering — as above, generic statement?

In order to ensure that there is balanced testing across the market, partnering is a key element could be considered for Users. This can be will be used for all multi party testing and not solely for the use of tTransfer of ownership.

If this approach is proposed for a UK Link Modification or Release it must be specified in the relevant Testing Approach document approved at UK Link Committee.

Xeserve will advise the partner matching, by individual emails, based on the following principles:

- — Minimum 2 partners per category where appropriate (Big 6, I&C, Challengers)

- ~~“Challenger” shippers will be balanced across the “Big 6” shippers, however, it was noted that due to the level of production activity with Big 6 organisations, the larger organisation may have to carry out more tests to enable all parties to take an active part in Industry Testing as they will, potentially, be matched with 4-5 challenger organisations each.~~
- ~~Geographic considerations will be made to the matching where possible, however, this cannot be guaranteed.~~
- ~~iGT matching will also be made to ensure that appropriate testing can be made~~

~~If the Testing Approach requires that Users shippers are unable to arrange testing with any of their other Users agreed partners (either for an individual test or for all testing) and Users do not participate with one another this will be escalated to the UK Link Committee. Users will be identified.~~<sup>[42]</sup>

~~The UK Link Modification or Release Testing Approach document will specify the timeline that Users must agree scope of partnered testing, the relevant data~~

~~The complete populated matrix will be held by Xoserve and a copy provided to the UK Link Committee for their information~~

~~Partners will need to plan, co-ordinate and organize their own planning and communications meetings and Xoserve the Transporter Agency will not be part of the bilateral discussions (unless specific part of the process). If the Transporter Agency is required in this process this must be stated in the UK Link Modification or Release Testing Approach document.~~

~~**For details of the dummy portfolio, see data section 6.4**~~

#### ~~Objections/Withdrawals~~

~~Industry Testing will cover all objection reason codes where the test is appropriate.~~

#### ~~4.5 File Transfer Principles~~<sup>[43]</sup> ~~— generic approach required~~

~~File transfer principles are defined in the UK Link Manual Supplementary Document – UK Link File Transfer Guide. The UK Link Overview Manual specifies how Code Communications are passed. Where possible these communication protocols should be followed.~~

~~The UK Link Modification or Release Testing Approach will specify whether these protocols will be applied or whether alternative methods shall be employed – e.g. a UK Link Batch File being passed via email for the purposes of testing.~~

~~The UK Link Modification or Release Testing Approach will specify how any files being conveyed by means other than the UK Link Network (I’X) will be named. Any test files via the UK Link Network **must** be prefixed by ‘TN’ to denote that it is a test file and to avoid confusing with production files.~~

~~The file transfer principle for Industry Testing is dependent on the ‘IX folder’ being used for live file transfer activities. Each organisation will have a ‘BGT01’ and ‘General’ folder within each IX node they own. The principle is:~~

- ~~Scenario 1 – If the ‘BGT01’ folder is used to transfer live/ production files then the ‘General’ folder should be used for Test file transfers; and~~
- ~~Scenario 2 – If the ‘General’ folder is used to transfer live/ production files then the ‘BGT01’ folder should be used for test file transfers.~~<sup>[44]</sup>

~~In most instances Scenario 1 will apply to Shipper participants whilst Scenario 2 will apply to Non-shipper participants, though not for all instances.~~

File transfers to and from industry participants will be via the EFT system

- The current file transfer polling schedule mechanism will be used (the current process scans for files every 5 minutes).
- Files generated from Xoserve to the stakeholders (including ERR, FRJ file types) will be delivered to the existing Import folders at the stakeholders IX server with a 'TN' prefix.
- Stakeholders should not, normally, send duplicate files — i.e. files that have already been sent to Xoserve and have been previously processed. Duplicate files received will be rejected and a corresponding FRJ file will be sent to the stakeholders. However, as part of a negative test a duplicate file can be sent

#### 4.6 Critical Path (Lifecycle) & Support schedule

Case by case, but within a 'maximum' set of parameters that Xoserve can support

All activity throughout Industry Testing will take place in "real time" and there will be no accelerated timelines, therefore, it is essential that all parties understand the lifecycle and requirements to ensure that full testing can take place

Figure 4 outlines the characteristics of each classification of change

**FIGURE 4 – CHANGE CHARACTERISTICS**

Classification	Definition
'Must Have'	Design Change (either Xoserve or External Party or both). Solution will not work without this change and/or a significant risk that the File Formats will not be consistent with the solution.
'Should Have'	A change identified that would provide more / additional information to provide clarity to the User.—
'Could Have'	Administrative.

#### 4.2 User Testing Definition

This process will be subject to discussion between the relevant User(s) and the Transporter Agency.

- Days and dates requested.
- Detailed descriptions of the nature of testing to be undertaken and the flows expected to be used.
- Bookings can be cancelled without penalty up to 5 working days before the test date. Cancellations made after this deadline will be charged.<sup>[45]</sup>
- Once booking request is received Xoserve will confirm that the booking slot can be accommodated and send a confirmation to the User making the request.

- At least 5 Working Days before the first test slot the User will be contacted to confirm connections to the system.

## 5. REGISTRATION PROCESS

Prior to taking part in Industry Testing any stakeholder wishing to participate needs to register their interest as part of the UK Link Modification or Release Testing Approach approval cycle. The User must respond to [uklink@xoserve.com](mailto:uklink@xoserve.com) when the document is issued for review.

Registration must be completed via the Xoserve registration process a minimum of 2 weeks one month before the testing commencement date.

Information required at this point includes:

- Name of organization.
- Primary and secondary contacts – including full name, telephone and email contact details.
- Confirmation of the intention to participate; and any change in stakeholder registration details should be sent to Industry Engagement.
- ~~Days and dates requested.~~
- ~~Detailed descriptions of the nature of testing to be undertaken and the flows expected to be used.~~
- ~~Bookings can be cancelled without penalty up to 5 working days before the test date. Cancellations made after this deadline will be charged.~~
- ~~Once booking request is received Xoserve will confirm that the booking slot can be accommodated and send a confirmation to the User making the request.~~
- ~~At least 5 Working Days before the first test slot the User will be contacted to confirm connections to the system.~~<sup>[46]</sup>

## 6. TEST ENVIRONMENT AND DATA

### 6.1 Test environment ~~is this needed~~

During Industry ~~T~~esting the test environment will include the following components:

- IX production and a test instance of the EFT mechanism will be used to support file transfers;
- AMT Marketflow will be available to validate file formats; and
- Office365 will be available to support those file types which can be submitted via email.
- SAP ISU with appropriately tested code deployed
- SAP BW
- ~~DES~~
- ~~CMS~~
- ~~Gemini t~~

~~Outside of these times~~ The test system will be available to ~~U~~users for participant focused testing. The booking process will ensure that no one, or group of, ~~U~~users exploit use of the system to the detriment of others.

The most complex aspect of the Test System is the test data and as such is likely to be the area that imposes the most restrictions on ~~U~~users. Such restrictions might be in the form of the type of data available and, therefore, the nature of testing possible. Similarly the data set up required by one group of ~~U~~users might not be consistent with the data set-up preferred by another user or group of users.

The number of ~~U~~users that may concurrently use the service will depend on:

- ~~The number of bookings received for any given Test Slot / week [47]~~
- The nature and complexity of the testing activities each user wishes to undertake
- The effort required for data set-up in advance of testing
- The ~~availability of the testing environment – either due to other planned testing, including Industry Testing, and nature of any PTS~~ maintenance required during any given test Slot / week.

Limits on the number of simultaneous ~~U~~users wanting to undertake testing in the test system may be imposed from time to time. These limits will only be imposed for practical reasons ~~and an overall cap of xx simultaneous users has been set.~~ This cap will be kept under review following operational experience.

### 6.2 Software Versions

~~For Industry Testing it is expected that the software version would be the planned production code following implementation of the UK Link Modification or Release.~~

~~For User Testing it is expected that this would normally be the current version of the production code. A User may specify an alternative version if required. Where the Transporter Agency are unable to fulfil such a request the reasons for doing so must be provided to the User(s). In general the test environments mirror the live system – both in terms of the base data and the versions of the software applications. However, there will be occasions when the software is different between the live and one or other test environment – for example:~~

- ~~Patches may be applied to the live service before they are applied to the test environments. In general the test environments will be patched at approximately the same time but there may be a short lag.~~
- ~~Some patches may be applied to one or both test environments for final proving before being released to live.~~



- Data will be copied from the live environment into the test service from time to time to ensure that they do not drift too far out of 'sink'.

In general, participants will be informed of such variations if there is any impact on them.

### 6.3 Data Refresh

In order to ensure that all parties use the same data and enable full testing to take place, ~~X~~ eserve the Transporter Agency will be carrying out appropriate data cuts. It is recommended that All eOrganisations carrying out their own data cut must do so under the same conditions and at the same time.

Data may only be disclosed in line with that of the production environment. A portfolio ~~ue to data protection sensitivities and protection of data on the supplier registry, of manufactured data will be provided~~ anonymisation will take place and a proportion of the full portfolio will be used for the purposes of testing the Supply Point Administration processes. [48] Details of this have been shared, however, are provided in the attached Data Item Overview.

A population of data should be manufactured for Supply Meter Points in This covers all areas; shippers, GTs, iGTs Networks as well as the GT Networks. and DMSPs

### 6.4 Dummy Manufactured Data Portfolio

The Dummy portfolios will be provided to all registered market participants when required and will be based on the following Manufactured Data portfolio will be published to Users. It will be refreshed in advance of Industry Testing.:

- 50 GT meter points per shipper
- 50 iGT meter points per shipper

	Domestic	I&C
Class 1	0	10
Class 4	40	0
	Prime	Sub
Class 1	4	2
Class 4	2	5
	MRF - D	MRF - Monthly
Class 1	10	0
Class 4	0	40
	Prepay meter	Credit meter
Class 1	0	10
Class 4	15	35

### Dummy portfolio – building asset & read history

When creating the dummy points, asset and read history will not be provided, therefore, shippers using the dummy portfolio will need to create the history. This can be actioned in several ways which will be understood by the shipping community as this will be done using normal operational processes; however, the following provides an example of how this may be done:

1. ~~Dummy meter points in the system will be loaded with asset details and opening read (read of 0). (Read 1) (Asset 1)~~
2. ~~New shipper to take over the meter point from Xoserve(dummy shipper), load the transfer reads as part of the process (Read 2)~~
3. ~~Stakeholders can then send in the Meter readings via the files like UMR, DLC. ( Read 3)~~
4. ~~Shippers taking over these meter points should update (exchange) the assets along with readings for effective date after their ownership start date. (It will create both asset and reading history). (Read 4) (Asset 2)~~
5. ~~Shippers can then allow this meter point to be taken by other shipper (including Xoserve), so that as part of transfer of ownership on opening and closing read can be loaded. (Read 5)~~
6.

~~It should be noted that the timeline for the history record creation could be between 2—3 months, based on how the flow is been executed by the stakeholders.~~

## 7. DEFECT AND QUERY MANAGEMENT

During Industry Testing, users can report any suspected defect or query to ~~Xoserve~~ the Transporter Agency via the processes detailed in UK Link Modification or Release Testing Approach, Sections 7.1 and 7.2 below.

~~There will be a daily telephone conference call to enable users to discuss defects arising from the previous day, as well as any planned remedies to existing issues. The call details are as follows:~~

~~UK dial in: 0121 210 9185~~

~~India dial in : +000 0800 852 1300~~

~~Participant code : 5377099078#~~

~~Defects will not be raised through this call and should continue to follow the Defect Management process.~~

~~Details of any issues that affect multiple users and specifically those that mean that the Industry Testing environment is unavailable will be published on Xoserve.com. The link to the UK Link pages is:~~

~~<http://www.xoserve.com/index.php/our-change-programme/uk-link-programme/>~~

~~Additionally, Xoserve~~ The UK Link Modification or Release Testing Approach will document any escalation procedures, for example the Transporter Agency will contact Primary and Secondary registered users, by email, if there is an issue affecting all participants.

The UK Link Modification or Release Testing Approach will define the Defect Management process.

### 7.1 Defect management process

- ~~• Defects should be reported to the Xoserve Service Desk via telephone (0845 600 0506). This is the same number as used for production incidents. Therefore, it is important that callers clearly state the call is in connection to UK Link Industry Testing.~~
- ~~• The Service Desk is open 24 hours a day. However, UK Link Testing support will be between the hours of 9.00am to 5.00pm, Monday to Friday (UK time).~~
- ~~• All calls will be initially logged at the Service Desk as a P3. However, this is not necessarily the category it will retain. Due to the service desk working on a production system, this will be logged as P3 and then amended as required by the UK Link Committee~~

- ~~An email facility to raise defects is also available using servicedesk@xoserve.com, where evidence should be attached directly.~~
- In order to assist in fast and effective resolution of the defect, supporting evidence for each defect ~~will~~ may need to be provided, as documented in the UK Link Modification or Release Testing Approach. This may include:
  - Replication steps;
  - Screenshots;
  - Copy of the file; and
  - Test data.

Details of how to provide this information is provided in the full process (see defect management link above). A standard template will also be provided to all primary & secondary contacts as per the attached.

~~Defects will be assessed by the UK Link Committee, and a priority will be assigned. This will be communicated either by phone or email to the originator and any disputes regarding the priority can be discussed with the Triage Team. However, to ensure that all defects are treated equitably the same guidelines will be used for all parties~~

~~Figure 5~~ The table below provides a description of the four defect priorities. The , and the associated target resolution time that Xoserve will aim to work to will be defined in the UK Link Modification or Release Testing Approach.

**FIGURE 5 – DEFECT PRIORITIES**

Severity	Description	Resolution Time
P1 - Critical	A failure preventing any testing or usage of the system. <b>Example:</b> Entire Application System / Servers unavailability.	<del>Within</del> <u>24 hours</u> <u>TBC</u>
P2 - High	A failure preventing testing or usage of a significant part of the system or for which no workaround exists. <b>Example:</b> (a) Web/portal accessibility is entirely affected and there is no workaround for that process via files. (b) Transfer of ownership process is affected due to a code/data issue and there is no workaround via File or web.	<del>2 days</del> <u>TBC</u>
P3 - Medium	A failure affecting crucial system functions but for which a workaround exists, enabling testing and usage of the system to continue. <b>Example:</b> File process activity for read upload is impacted via file process, but there is a workaround with Web portals.	<del>3 days</del> <u>TBC</u>
P4 - Low / Cosmetic	A failure, which does not seriously impact functionality and testing/usage of the system can continue; or an error that causes annoyance or a documentation problem with little impact on testing or usage of the system. <b>Example (Low):</b> Failure of a particular batch process which is not impacting the execution of other files related to that process and any queries received from shippers on the data/functionality issues in Market trials phase. Also new user access creation/reset. <b>Example (Cosmetic):</b> Query received from Stakeholders on documentation.	<del>5 days</del> <u>TBC</u>

~~The above resolution times are based on business days and primary support being in place. Primary support and secondary will be in place for the duration of Industry Testing (see Critical path & support schedule).~~

~~As progress is made on each defect, the ticket 'Contact Log' will be updated and, where appropriate, users will be advised directly of a change in status. As each defect is resolved, Xoserve will contact the originator, preferably, by telephone or email to notify them of the resolution and change the ticket to 'closed'.~~

~~Following discussion, the process will now incorporate new statuses the details of these are incorporated in the Defect Management document attached. Throughout the defect management process, considerable interaction between all parties will take place to ensure that there is full and effective resolution of defects. It is, however, recommended that this is, predominantly, done via email to ensure that all appropriate information is provided~~

## **7.2 Queries**

A query can be any request for information or clarification of understanding.

~~Where such a process is required this will be defined in the UK Link Modification or Release Testing Approach document. This will provide the relevant contact details and an outline of the proposed process. Industry Testing queries should be emailed to: [box.xoserve.UKLink\\_MarketTrials@xoserve.com](mailto:box.xoserve.UKLink_MarketTrials@xoserve.com); and should not be raised via the Service Desk. Queries will be added to the Industry Testing Query Log, and assigned a reference number which will be quoted in any correspondence.~~

~~The objective will be to respond to all queries within 10 days, with urgent queries, that are directly affecting an organisations ability to continue with testing, will be prioritised.~~

## **7.3 Defect and Query Reporting**

~~Defect reporting processes will be defined in the UK Link Modification or Release Testing Approach document. During Industry Testing, users can report any suspected defect or query to Xoserve via the processes detailed in Sections 8.1 and 8.2 below.~~

~~There will be a daily telephone conference call to enable users to discuss defects arising from the previous day, as well as any planned remedies to existing issues. The call details are as follows:~~

~~UK dial in: 0121 210 9185~~

~~India dial in : +000 0800 852 1300~~

~~Participant code : 5377099078#~~

~~Defects will not be raised through this call and should continue to follow the Defect Management process.~~

~~Details of any issues that affect multiple users and specifically those that mean that the Industry Testing environment is unavailable will be published on Xoserve.com. The link to the UK Link pages is:~~

~~<http://www.xoserve.com/index.php/our-change-programme/uk-link-programme/>~~

~~Additionally, Xoserve will contact Primary and Secondary registered users, by email, if there is an issue affecting all participants.~~

~~Defect Reporting~~

~~— Daily~~

~~— Providing updates on:~~

- ~~• Number of defects raised (by severity);~~
- ~~• Number of defects closed (by severity);~~
- ~~• Number of defects outstanding; and defects rejected~~
- ~~• A central repository of open defects will be held on Xoserve.com. For P1 and P2 defects this will be updated on a daily basis and all other statuses will be updated in the central repository on a weekly basis.~~
- ~~• Closed defects will be archived once closed but will remain available for view.~~

~~Defects will only be placed in this repository if the impact assessment indicates this has the potential to impact multiple parties. For the avoidance of doubt, those impacting individual organisations will only be shared with that organisation.~~

~~• Query Reporting:~~

~~• Weekly;~~

~~• Providing updates on the previous week:~~

- ~~• Number of queries raised;~~
- ~~• Number of queries closed; and~~
- ~~• Number of queries open.~~

~~Queries impacting multiple parties will be added to the central Q&A file, but those specific to individual organisations will only be shared with the specific organisation.~~

## **8. PROGRESS REPORTING**

~~Summarising at a high level:~~

~~All reporting will now be based on file formats, however, all industry participants will be responsible for providing evidence to the UK Link Committee regarding the full testing of processes~~

~~Stakeholder specific reporting will be provided to Ofgem (or their Assurance Provider);~~

- ~~• Reports shared with other stakeholder groups will be anonymised;~~
- ~~• Provided on a daily basis (Monday to Friday) on the previous day's activity;~~
- ~~• Areas reported on will be the:
  - ~~— Number of parties taking part;~~
  - ~~— Number of files tested; successfully and unsuccessfully; and~~
  - ~~— Number of times each file has been tested.~~~~
- ~~• Defect reporting will be provided as detailed in Section 8 above.~~

~~Reports will be published from Monday to Friday excluding weekends and bank holidays. Any files received on weekends / bank holidays will be captured in the report published on the next working day.~~

~~Anonymised Reporting will be published to show the number of files that were processed the previous working day. Reports will be published by midday on each working day. The report will be published on Xoserve's web site and via email to the primary and secondary contact names provided. The UK Link Modification or Release Testing Approach document will define the progress reporting planned. This must specify the reporting frequency and what is required in the report – such as planned vs actual testing completed, defects raised, processes tested.~~

~~If requested in the Testing Approach document Ddefect details, such as count, status, severity and process-related impacts will be documented in the daily reports and shared with the stakeholders.~~

## ~~9. DEPENDENCIES~~

~~The start of each phase of Industry Testing is dependent on the following:~~

- ~~• Data cut provision is agreed by a sufficient level of participants~~
- ~~• Adequate data is loaded successfully into Xoserve's system and fallout notified to impacted parties~~
- ~~• Adequate data is loaded by all parties to enable sufficient testing<sup>[49]</sup>~~

## **10. USER TESTING PROVISIONS AND RESTRICTIONS**

~~The User Testing service will be subject to contract between the User and the Transporter Agency. Users will be required to agree requirements with the Transporter Agency. These requirements will form the basis of the User Testing scope.~~

~~The User Testing service will be booked on a first come, first served basis. An alternative date will be suggested if the requested date is unavailable.~~

~~It should be noted that it is reasonable to expect periods when the test system will not be available due to technical reasons. Re-scheduling of bookings will be required following such periods. Where possible these will be factored into the schedule of agreed bookings.~~

~~Requests for access to the test system should be for half days, with a minimum of 1 and a maximum of 10, for any one company, in any given week.~~

~~The booking arrangements will be kept under review by XoserveThe Transporter Agency following operational practice and modified in light of the experience gained in the way the test system is used.~~

~~A Test Slot cost recovery fee of £xx will be charged, for each Test Slot, and invoiced as a User Pays charge<sup>[50]</sup>. Additional fees as encountered by the Transporter Agency shall be identified and chargeable to the User – e.g. data preparation or refreshes.~~

~~XoserveThe Transporter Agency accepts no responsibility for the User's testing or the results of such testing.~~

~~XoserveThe Transporter Agency makes no guarantee that the UK Link Systems in use by the Test systems shall mirror the UNC Central Systems in use in the live environment, both in terms of the base data and the versions of the software systems. However, XoserveThe Transporter Agency shall attempt to keep the User informed of such variations.~~

Test Slots are booked at ~~Xeserve~~The Transporter Agency's absolute discretion. ~~Xeserve~~The Transporter Agency reserves the right to refuse the User a Test Slot at any time and for any reason. ~~Xeserve~~The Transporter Agency reserves the right to cancel Test Slots at any time and for any reason.

By requesting a Test Slot and subsequently receiving a Test Slot confirmation the User accepts that it will be liable for the prevailing Test System Charges as endorsed by the UNC Committee.

The User accepts that use of the Test System is restricted only to the Specified Testing during an agreed Test Slot. Any further testing must be agreed with ~~Xeserve~~The Transporter Agency prior to use.

~~The User accepts that any changes to the arranged test slots must be received at least five working days before the test date otherwise the user will be charged for the arranged bookings.~~

~~Xeserve~~The Transporter Agency reserves the right to place further formal constraints on the use of the Test system prior to or during any Test Slot. These constraints may be varied upon instruction from ~~Xeserve~~The Transporter Agency to the User at any time. However, notwithstanding any such constraints, the Specified Tests carried out by the User during its Test Slot shall be at the discretion of the User.

~~Xeserve~~The Transporter Agency shall not be responsible for defining or managing the Specified Tests, or checking the results.

~~Xeserve~~The Transporter Agency reserves the right to monitor the User's activities at any time during a Test Slot.

~~Xeserve~~The Transporter Agency reserves the right to restrict the availability of Test Data to the User.

The User accepts that limited support resources are available to support the Test System and such resources may be constrained from time to time.

Whilst a number of safeguards are in place to separate test flows from live it is the Users responsibility to ensure that these are employed correctly to prevent test data from entering the live service and similarly to prevent live data from entering the Test System.

The User accepts that they must disconnect from the Test System<sup>[51]</sup>

## 11. Definitions, Acronyms & Abbreviations

Term	Meaning
AQ	Annual Quantity
BW	Business Warehouse
CMS	Contact Management Service
COB	Change Overview Board
DCC	Data Communications Company
Defect	Also called as a fault or a bug, a defect is a deviation from expected results in the test script.
DES	Data Enquiry System
DMSP	Daily Meter Service provider
DN	Distribution Network

<b>Term</b>	<b>Meaning</b>
DN Link	Distribution Networks' Link (web portal)
EFD	Effective From Date
GCC	Gemini Consequential Changes
GRC	Governance Risk Compliance
GT	Gas Transporter
HA	High Availability
HPQC	HP Quality Centre
IDAM	Identity and Access Management
iGT	Independent Gas Transporter
IX	Information Exchange
LDZ	Local Distribution Zone
LSP	Large Supply Point
MAM	Meter Asset Manager
MDD	Market Domain Data
MPRN	Meter Point Reference Number
MT	Market Trials
MTWG	Market Trials Working Group
PwC	Pricewaterhouse Coopers
PNSG	Project Nexus Steering Group
RGMA	Review of Gas Metering Arrangements
RICEFWs	SAP custom objects – Reports, Interfaces, Correspondences, Extensions, Forms, Workflows
RRC	Rational Requirements Composer
SAP-BW	SAP business warehouse
SAP-ISU	SAP's Industry Specific Solution for Utilities
SAP-PO	SAP's Process Orchestration module
SMSO	Smart Meter System Organisation
SPA	Supply Point Administration
SSP	Small Supply Point
TOO	Transfer of Ownership
UKLC	UK Link Committee



## Document History

### Reviewers

This document has been distributed to, or its status and location for electronic retrieval made know to, the following persons for review:

Name	Role	Organisational Unit	Outcome (1, 2 or 3)

### Inform

Name	Role	Organization Unit	Inform

### Approvers

Name	Role	Organisational Unit	Outcome (1, 2 or 3)



## References

This document makes references to the following documents. These reference documents should be read in conjunction with this document.

File name	Location	Version
<u>Central Repository (Baseline):</u>	<a href="http://www.xoserve.com/index.php/our-change-programme/uk-link-programme/uk-link-programme-workstream-updates/uk-link-programme-market-trials/">http://www.xoserve.com/index.php/our-change-programme/uk-link-programme/uk-link-programme-workstream-updates/uk-link-programme-market-trials/</a>	
<u>File formats : Shippers</u>	<a href="http://www.xoserve.com/index.php/our-change-programme/uk-link-programme/uk-link-programme-file-formats/">http://www.xoserve.com/index.php/our-change-programme/uk-link-programme/uk-link-programme-file-formats/</a>	
<u>File formats :non shippers</u>	<a href="https://xoserve.sharepoint.com/sites/iGT">https://xoserve.sharepoint.com/sites/iGT</a> <a href="http://www.xoserve.com/index.php/our-systems/extranet-secured-sites/">http://www.xoserve.com/index.php/our-systems/extranet-secured-sites/</a>	
<u>Market Trials .box</u>	<a href="mailto:box.xoserve.UKLink_MarketTrials@xoserve.com">box.xoserve.UKLink_MarketTrials@xoserve.com</a>	
<u>Defect e-mail :</u>	<a href="mailto:servicedesk@xoserve.com">servicedesk@xoserve.com</a>	
<u>All Market Trials documents and information :</u>	<a href="http://www.xoserve.com/index.php/our-change-programme/uk-link-programme/uk-link-programme-workstream-updates/uk-link-programme-market-trials/">http://www.xoserve.com/index.php/our-change-programme/uk-link-programme/uk-link-programme-workstream-updates/uk-link-programme-market-trials/</a>	

